OUTLINE

Californians Without Safe Water
Update 2013

1. **Executive Summary**
   - 1.1. Purpose of Report
   - 1.2. The Need
   - 1.3. Progress
   - 1.4. Policy Recommendations

2. **Introduction**

2.1. Purpose of Report

- This section provides an explanation on the purpose, intent, and report limitations of the document. The primary focus of this report will be on drinking water and wastewater issues faced by disadvantaged communities and by tribal communities.

2.2. The Need

2.2.1. Health Disparities

- This section will provide a general description of health disparities that may exist due to lack of clean, safe water.

2.2.2. Healthy Communities

- This section will provide a general description of the need for clean, safe water as major component to establish a healthy community.

2.2.3. Climate Change

- This section will identify the vulnerabilities to communities from climate change with respect to water. Use relevant information from CDPH Feb 2012 document (Climate Action for Health: Integrating Public Health into Climate Action Planning), UNEP Resource Centre Apr 2011 guidebook (Technologies for Climate Change Adaptation – The Water Sector –), CDM for USEPA and DWR Nov 2011 handbook (Climate Change Handbook for Regional Water Planning), and other pertinent documents.

2.2.4. Watershed Impacts

- This section will provide a general description on sources of watershed wide impacts such as nitrates, salts, pesticides, untreated sewage from failing wastewater systems, nitrate inputs to groundwater from properly functioning septic systems, etc.

2.3. Communities without Safe, Clean Water

2.3.1. Communities without Safe Drinking Water Treatment and Distribution

- This section will provide a general description of communities without safe drinking water and include individual homeowners, DACs, and Tribal communities and governments. (References: Water Boards report

on Communities that rely on Contaminated Groundwater; UC Davis report on nitrate contamination in Tulare Lake region and Salinas Valley)

2.3.2. Communities without Adequate Wastewater Treatment and Collection

- This section will provide a general description of communities without adequate wastewater treatment and collection systems and include individual homeowners, DACs, and Tribal communities and governments. (Reference: 2011 Water Boards funding list.)

2.3.3. Communities at Risk

- This section will define what is meant by "at Risk" for the purpose of this report and provide a general description of communities at risk. Possible challenges that may put communities at risk include impacts from groundwater contamination, aging/failing infrastructure, etc.

3. Meeting the Water Needs of Economically Disadvantaged Communities

3.1. Drinking Water Treatment and Distribution

3.1.1. Infrastructure Challenges

- This section will focus on infrastructure challenges facing small drinking water systems. Possible topics include:
  1) Operation & Maintenance of the water system and treatment facility.
  2) Water systems with only a single well and no back-up supply
  3) Low water pressure events that jeopardize water quality in the water distributions systems. Commonly due to older distributions systems that leak or have frequent water main breaks.
  4) Discuss disposal of drinking water treatment plant backwash water and residuals. This topic ties into the adequacy of the wastewater treatment system.

3.1.2. Water Quality Challenges

- This section will focus on water quality challenges facing small drinking water systems. Possible topics include:
  1) Nitrate contamination of groundwater wells. (Reference: UC Davis report on nitrate contamination in Tulare Lake region and Salinas Valley)
  2) Contamination of groundwater wells by other chemical constituents. For example, many small water systems have naturally occurring constituents such as arsenic, gross alpha, and/or uranium in their groundwater above the drinking water standard. (Reference: Water Boards report on Communities that rely on Contaminated Groundwater)
  3) Explain the effect on small water systems when the arsenic drinking water standard was lowered from 50 ppb to 10 ppb (Federal 2006 & State 2008). Many small water systems operate wells with arsenic levels between 10-50 ppb and no longer met the new drinking water standard. Also discuss similarities that may occur if a Chromium 6 drinking water standard is implemented.

4) Explain the challenges faced by systems using hard rock wells such as the reduced quantity of water in dry years.
5) Explain challenges faced by systems when monitoring results for a primary drinking water standard indicate that that the concentration is increasing and may soon exceed the drinking water standard.
6) Explain implementation challenges with Point of Entry/Point of Use devices.

3.1.3. Funding and Affordability Challenges

- This section will focus on small drinking water system funding and affordability challenges. It may include funding challenges faced by federal/state/local agencies that are providing the funding. Possible topics include:
  1) Explain affordability challenges that small water system face when installing new infrastructure. Costs to repay a loan and ongoing Operation & Maintenance costs. (References: UC Davis report on nitrate contamination in Tulare Lake region and Salinas Valley. CDPH Drinking Water State Revolving Fund Intended Use Plan)
  2) Explain funding challenges faced by small water systems who apply for grants/loans to correct a deficiency. Possible challenges include:
     a) Projects are not shovel ready which delays funding.
     b) Technical challenges associated with evaluating and determining most feasible alternative.
     c) Systems have difficult time meeting Technical, Managerial, and Financial (TMF) requirements which delays funding or may make them ineligible for funding such as finding and retaining certified operators in rural areas.
     d) Overcoming obstacles to proceed with consolidation/ interconnection projects and regional consolidation projects.
     e) Inadequate water rights making them ineligible to receive funding.
     f) Proposition 218 challenges on increasing water rates.
     g) Legal issues that arise (ownership, service boundaries, status of legal entity, lack of legal entity, water rights, etc.) and no legal staff readily available to address these issues.
     h) Systems do not have sufficient reserve funds to cover the cost to apply for state/federal funding, or to temporarily pay project costs from consultants/contractors as they await for reimbursement from state/federal agencies.
  3) Explain challenges faced by federal/state/local agencies who administer grant/loan programs for small water systems. Possible challenges include:
     a) Ensuring that each funded project is the best long term solution and that systems will be viable and able to cover future operation and maintenance costs associated with the project.

b) Funding becoming frozen, that adversely affects small water system projects which have very little to no cash available to continue the project.

4) Include a Case Study in this section that shows a completed water system financial assessment where the system will be unable to afford the O&M costs associated with the project.

3.1.4. Solutions

- This section will focus on possible solutions for small water systems to provide safe drinking water. These solutions may include:
  1) Consolidation or interconnection of a small water system with a neighboring larger water system. This is a highly desirable option, but involves a number of challenges and obstacles such as a high capital cost and legal issues.
  2) Regional consolidation project. This is a highly desirable option, but involves a number of challenges. We plan to highlight a successful Regional Consolidation Project.
  3) Finding an alternate supply such as drilling a new well. One of the challenges that will be discussed is locating a cleaner source of groundwater that is still relatively close to the water system.
  4) Constructing a water treatment plant. One of the challenges that will be discussed is affordability of WTP O&M costs.
  5) Utilize local Integrated Regional Water Management planning efforts to begin discussion on issues facing small water systems and help identify solutions.

3.2. <u>Wastewater Treatment and Collection</u>

3.2.1. Infrastructure Challenges

- This section will focus on infrastructure challenges facing small community wastewater systems. Possible topics include:
  1) Failing septic systems
  2) Old and undersized wastewater treatment plants systems that no longer meet water quality standards
  3) Operation and maintenance of small community wastewater systems
  4) Discuss disposal of drinking water treatment plant backwash water and residuals. The need for additional sewer capacity and removal of specific constituents to meet wastewater disposal requirements.

3.2.2. Water Quality Challenges

- This section will focus on water quality challenges facing small community wastewater systems. Possible topics include:
  1) Explain the challenges to upgrade existing wastewater treatment systems to meet more stringent water quality standards.

3.2.3. Funding and Affordability Challenges

- This section will focus on small community wastewater system funding and affordability challenges. It may include funding challenges faced by federal/state/local agencies that are providing the funding. Possible topics include:
  1) Explain affordability challenges that small community wastewater systems face when installing new infrastructure. Costs to repay a loan and ongoing Operation & Maintenance costs. (Reference: Water Boards' Small Community Wastewater Strategy)
  2) Explain funding challenges faced by small community wastewater systems who apply for grants/loans to correct a deficiency. Possible challenges include:
     a) Projects are not shovel ready which delays funding.
     b) Systems need financial, technical, and regulatory assistance to bring small community wastewater systems into compliance which may delay funding.
     c) Obstacles when converting a septic system area to a sewered area. One major challenge is funding for sewer laterals that will be located on the residence property.
     d) Proposition 218 challenges on increasing sewer rates.
     e) Legal issues that arise (ownership, service boundaries, status of legal entity, lack of legal entity, etc.) and no legal staff readily available to address these issues.
  3) Explain challenges faced by federal/state/local agencies who administer grant/loan programs for small community wastewater systems. Possible challenges include:
     a) Ensuring that each funded project is the best long term solution and that systems will be viable and able to cover future operation and maintenance costs associated with the project.
     b) Funding becoming frozen, that adversely affects small water system projects which have very little to no cash available to continue the project.

3.2.4. Solutions

- This section will focus on possible solutions for small community wastewater systems to provide adequate wastewater treatment and collection. These solutions may include:
  1) Discussion on advanced wastewater solutions that are available.
  2) Discussion on projects to sewer an area, where the community is on old and failing septic systems.
  3) Replacing failing septic systems.
  4) Utilize local Integrated Regional Water Management planning efforts to begin discussion on issues facing small wastewater systems and help identify solutions.

5) Upgrading existing septic systems to reduce nitrate inputs to groundwater.

4. A Focus on California's Native American Population

- The outline for this chapter is still under development by the Tribal Advisory Committee.

5. Progress 2001 to 2011 and Implementation Challenges

5.1. Progress from 2001 to 2011

- This section will discuss the progress that has occurred over the last ten years to provide safe and clean water to all Californians. The following are possible topics that are shared by both drinking water and wastewater:
  1) Disadvantaged Community (Health & Safety Code section 116275) defined as less than 80% of Statewide MHI and Severely Disadvantaged Community is less than 60% of Statewide MHI.
  2) California Financing Coordinating Committee (CFCC). This committee is comprised of both state & federal agencies and hold funding fairs throughout the year at various locations near disadvantaged communities.
     http://www.cfcc.ca.gov/

5.1.1. Drinking Water Treatment and Distribution

- This section will discuss progress that has occurred over the past ten years to provide safe drinking water. The following are possible topics:
  1) Discuss the funding sources/amounts available from 2001 to 2011 to address drinking water quality issues. Funding is typically provided by CDPH, DWR, Water Boards, USDA, CDBG.
  2) Discuss progress by the CDPH Drinking Water program and other State/Federal agencies to provide additional grant funding for DACs. Possible topics may include:
     a) All DWSRF projects that address health related issues (Categories A-G) are now invited to apply for funding.
     b) DWSRF maximum grant funding (principal forgiveness) increased for DACs from up to $1 million per project to up to $3 million per project.
     c) DWSRF grant funding percentage increased from providing up to 80% grant funding to now providing up to 100% grant funding.
     d) Funding available for Planning Studies which may include engineering reports, project design (plans & specs), CEQA compliance, rate studies, etc. Previously systems had to provide upfront funding for these items.
     e) Funding available for Point of Use or Point of Entry devices.
     f) Additional assistance available for State supported technical assistance providers

3) Discuss the number of completed state/federally funded drinking water projects that benefited DACs from 2001 to 2011.
4) Discuss the change in regulations allowing the use of POU/POE devices (Health & Safety Code sections 116380 & 116761.25).
5) Discuss the progress made by Tribal communities and governments to provide safe drinking water.
6) Discus the level of monitoring of public systems which has increased over the last ten years, and review the frequency of exceedances and response to those exceedances.

5.1.2. Wastewater Treatment and Collection

- This section will discuss progress that has occurred over the past ten years to provide adequate wastewater treatment and collection. The following are possible topics:
  1) Discuss progress by the Water Boards and other State/Federal agencies to provide additional funding to DACs. Possible topics may include:
     a) Discuss development of the Water Boards' Small Community Wastewater Strategy.
     b) Discuss the creation of a Small Community Wastewater Fund by the Water Boards.
     c) Discuss how ARRA funding exceeded expectations for funding small community wastewater systems.
     d) Discuss the Water Boards use of interest received from repayments of CWSRF loans to provide additional grant funding for new projects.
     e) Cite progress/accomplishments from Water Boards' Bond Program Accomplish report.
  2) Discuss Water Boards' Draft Statewide Septic System Policy (March 2012) – how does the draft policy impact contaminant transport to surface and groundwater.
  3) Include a Case Study in this section on the Enchanted Heights Sewer Project in Riverside County that is connecting homeowners previously on failing septic systems to a local sewer collection system.
  4) Discuss the progress made by Tribal communities and governments to provide adequate wastewater treatment and collection.

5.2. <u>Implementation Challenges</u>

5.2.1. Drinking Water Treatment and Distribution

- This section will highlight the implementation challenges to provide safe drinking water for individual homeowners, disadvantaged communities, and Tribal communities and governments. These challenges will be tied to the action plan in the following chapter.

5.2.2. Wastewater Treatment and Collection

- This section will highlight the implementation challenges to provide adequate wastewater treatment and collection for individual homeowners, disadvantaged communities, and Tribal communities and governments. These challenges will be tied to the action plan in the following chapter.

6. An Action Plan to Achieve Clean, Safe Water for all Californians

This chapter will discuss the current state of access to safe water and the opportunities and challenges described earlier in the report. The Chapter will define state goals, objectives, and a timeline for meeting them to improve access to safe water. The chapter will identify actions and activities already being undertaken by individual Tribes, State Agencies, Federal Agencies, and Regions. Using the Integrated Regional Water Management approach, this chapter will focus strategy development around cross-agency and tribal/federal/state/regional/local partnerships that can maximize the impact of existing activities. The chapter will also provide recommendations for future research needs and changes in laws and regulations that would enhance access to safe water.

7. Conclusions

This chapter will focus on removal of the implementation barriers/impediments to achieve the actions set in the Action Plan chapter and will be the basis for the Recommendations in the Executive Summary.

8. References

Communities That Rely on Contaminated Groundwater. (AB 2222, Water Code Section 10782) Author: Water Boards. Draft Report to Legislature available December 2012.
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Water Boards' Small Community Wastewater Strategy. June 16, 2008. Author: Water Boards.
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California Department of Justice, Office of Attorney General (May 2012). Environmental Justice at the Local and Regional Level, Legal Background http://oag.ca.gov/sites/all/files/pdfs/environment/ej_fact_sheet_final_050712.pdf

9. Appendices

AB 2222 List
DPH Drinking Water Project List
SWRCB Wastewater List
Selections from Nitrate Study
Existing Funding Sources
Resources and Contacts

10. Figures

11. Tables